

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference SMC 60553/WO	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/GB 03/03837	International filing date (day/month/year) 04/09/2003	(Earliest) Priority Date (day/month/year) 12/10/2002
Applicant AVECIA LIMITED		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 6 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☒ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☐ the text is approved as submitted by the applicant.

☒ the text has been established by this Authority to read as follows:

INK COMPRISING CASEIN

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☐ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

☐ None of the figures.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/GB 03/03837

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-13

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1-13

An Ink comprising casein, a colorant and a liquid medium. In a second claim an ink is disclosed comprising casein, colorant, 1,2-benzisothiazolin-3-one and a liquid medium. In both inks the content of di- or trivalent metal ions is less than 0.1% by weight of the ink. Further a process for printing a porous substrate comprising ink jet printing a colorant and casein onto the substrate.

2. Claim : 14

The use of casein to improve ozone fastness.

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International Application No

GB 03/03837

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C09D11/00 C09D11/02 C09D11/04 C09D11/16

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C09D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EP0-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
2 X	WO 99 51695 A (SIEMENSMEYER KARL ; BASF AG (DE); BOHN HERIBERT (DE); HORN DIETER () 14 October 1999 (1999-10-14) page 4, line 30 - line 40; claim 8; examples 3-5	1-13
2 X	US 2002/067399 A1 (NORO MASAKI ET AL) 6 June 2002 (2002-06-06) paragraph [0270] - paragraph [0271]; claim 7 paragraph [0300]	1-13
2 P,X	EP 1 251 154 A (FUJI PHOTO FILM CO LTD) 23 October 2002 (2002-10-23) paragraph [0120]; claim 1 paragraph [0137]	1-13
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☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search

11 November 2003

Date of mailing of the international search report

23.02.04

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International Application No

GB 03/03837

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
4	X PATENT ABSTRACTS OF JAPAN vol. 2002, no. 10, 10 October 2002 (2002-10-10) -& JP 2002 179971 A (TOYO INK MFG CO LTD; TOYO FOOD COLOR & CHEMICAL CO LTD), 26 June 2002 (2002-06-26) abstract ---	1-13
4	X PATENT ABSTRACTS OF JAPAN vol. 1999, no. 05, 31 May 1999 (1999-05-31) -& JP 11 035860 A (DAINIPPON INK & AMP; CHEM INC), 9 February 1999 (1999-02-09) abstract ---	1-13
4	X PATENT ABSTRACTS OF JAPAN vol. 008, no. 145 (C-232), 6 July 1984 (1984-07-06) -& JP 59 053565 A (DAINIPPON TORYO KK; OTHERS: 01), 28 March 1984 (1984-03-28) abstract ---	1-13
4	X PATENT ABSTRACTS OF JAPAN vol. 012, no. 028 (C-471), 27 January 1988 (1988-01-27) -& JP 62 177076 A (TOYO INK MFG CO LTD), 3 August 1987 (1987-08-03) abstract -----	1-13

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Information on patent family members

International Application No

PCT/GB 03/03837

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9951695	A	14-10-1999	DE 19815129 A1	07-10-1999
			DE 59907374 D1	20-11-2003
			WO 9951695 A1	14-10-1999
			EP 1066355 A1	10-01-2001
			JP 2002510739 T	09-04-2002
			US 6494924 B1	17-12-2002

US 2002067399	A1	06-06-2002	JP 2001342373 A	14-12-2001

EP 1251154	A	23-10-2002	JP 2002309137 A	23-10-2002
			EP 1251154 A1	23-10-2002
			US 2003097959 A1	29-05-2003

JP 2002179971	A	26-06-2002	NONE	

JP 11035860 1	A		NONE	

JP 59053565 1	A		NONE	

JP 62177076 1	A		NONE	
